

Abstract

The present invention publicly discloses a self-locking mechanism of a manually tightened drill chuck, including a ratchet wheel, a clamp bearing, at least one elastic pawl, and a clip ring, wherein said ratchet wheel is fixed in connection with the main unit of said manually tightened drill chuck, and on its back there are provided ratchet teeth facing the end surface of said main unit; said clamp bearing is fixed in connection with the outside surface of a screw ring on said manually tightened drill chuck, and the end surface of this clamp bearing is provided with at least one ratchet wheel slot; said elastic pawl is fixed on said ratchet wheel slot, and it includes a protuberance and a tooth piece; and said clip ring includes at least two arc segments that can mutually antagonistically snap onto the front end position of said main unit, the outer perimeter surface of this clip ring is fixed in connection with a front cap of said manually tightened drill chuck, said clip ring is connected with said clamp bearing and drives said clamp bearing to rotate, and the end surface of said clip ring is provided with deep and shallow recesses for receiving the protuberance on said elastic pawl.